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Committee on the Peaceful Uses of Outer Space
Scientific and Technical Subcommittee
Fifty-third session
Vienna, 15-26 February 2016

Draft report

I. Introduction

1. The Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space held its fifty-third session at the United Nations Office at Vienna from 15 to 26 February 2016, under the chairmanship of V. K. Dadhwal (India).

2. The Subcommittee held [...] meetings.

A. Attendance

3. Representatives of the following [...] States members of the Committee attended the session: Algeria, Argentina, Australia, Austria, Belarus, Belgium, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czech Republic, Ecuador, Egypt, El Salvador, France, Germany, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Lebanon, Luxembourg, Malaysia, Mexico, Mongolia, Netherlands, Nigeria, Oman, Pakistan, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Slovakia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Thailand, Tunisia, Turkey, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Venezuela (Bolivarian Republic of) and Viet Nam.

4. At its 835th meeting, on 15 February, and at its 837th meeting, on 16 February, the Subcommittee decided to invite, at their request, observers for Angola, Cyprus, the Dominican Republic, Norway and Panama to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further

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requests of that nature and that doing so would not involve any decision of the Committee concerning status.

5. At its 835th meeting, on 15 February, the Subcommittee decided to invite, at its request, the observer for the European Union to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that doing so would not involve any decision of the Committee concerning status.

6. At its 837th meeting, on 16 February, the Subcommittee decided to invite, at its request, the observer for the Sovereign Military Order of Malta to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that doing so would not involve any decision of the Committee concerning status.

7. Observers for the Office for Disarmament Affairs of the Secretariat, the International Civil Aviation Organization (ICAO), the International Telecommunication Union (ITU) and the World Meteorological Organization (WMO) attended the session.

8. The session was attended by observers for the following intergovernmental organizations with permanent observer status with the Committee: European Organisation for Astronomical Research in the Southern Hemisphere (ESO), European Space Agency (ESA), European Telecommunications Satellite Organization (EUTELSAT-IGO) and International Mobile Satellite Organization (IMSO).

9. The session was also attended by observers for the following non-governmental organizations having permanent observer status with the Committee: African Association of Remote Sensing of the Environment (AARSE), Association of Space Explorers (ASE), Regional Centre for Remote Sensing of North African States (CRTEAN), EURISY, European Space Policy Institute (ESPI), International Academy of Astronautics (IAA), International Association for the Advancement of Space Safety (IAASS), International Astronautical Federation (IAF), International Astronomical Union (IAU), International Institute of Space Law (IISL), International Society for Photogrammetry and Remote Sensing (ISPRS), International Space University (ISU), National Space Society (NSS), Prince Sultan bin Abdulaziz International Prize for Water (PSIPW), Scientific Committee on Solar-Terrestrial Physics (SCOSTEP), Secure World Foundation (SWF), Space Generation Advisory Council (SGAC) and World Space Week Association (WSWA).

10. At its 835th meeting, on 15 February, the Subcommittee decided to invite, at their request, the observers for the Organization for Economic Cooperation and Development (OECD) and the Organization on Space Technologies for Societal Applications (Canada-Europe-United States-Asia) (CANEUS), as well as observers for the Space Mission Planning Advisory Group (SMPAG) and International Asteroid Warning Network (IAWN), to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that doing so would not involve any decision of the Committee concerning status.

11. A list of the representatives of States, United Nations entities and other international organizations attending the session is contained in A/AC.105/C.1/2016/INF/45.

B. Adoption of the agenda

12. At its 835th meeting, on 15 February, the Subcommittee adopted the following agenda:

1. Adoption of the agenda.
2. Election of the Chair
3. Statement by the Chair.
4. General exchange of views and introduction of reports submitted on national activities.
5. United Nations Programme on Space Applications.
6. Space technology for socioeconomic development in the context of the United Nations Conference on Sustainable Development and the post-2015 development agenda.
7. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment.
8. Space debris.
9. Space-system-based disaster management support.
10. Recent developments in global navigation satellite systems.
11. Space weather.
12. Near-Earth objects.
13. Use of nuclear power sources in outer space.
14. Long-term sustainability of outer space activities.
15. Examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union.
16. Draft provisional agenda for the fifty-fourth session of the Scientific and Technical Subcommittee.
17. Report to the Committee on the Peaceful Uses of Outer Space.

C. Election of the Chair

13. At its 835th meeting, the Subcommittee elected V. K. Dadhwal (India), Chair of its fifty-third session and Chiaki Mukai (Japan), Chair of its fifty-fourth session, pursuant to General Assembly resolution 70/82 of 9 December 2015.

D. General statements

14. Statements were made by representatives of the following member States during the general exchange of views: Algeria, Argentina, Australia, Austria, Brazil, Canada, China, Colombia, Costa Rica, Cuba, Czech Republic, Ecuador, El Salvador, France, Germany, India, Indonesia, Iran (Islamic Republic of), Israel, Italy, Japan, Kenya, Mongolia, Mexico, Nigeria, Oman, Pakistan, Philippines, Poland, Portugal, Qatar, Republic of Korea, Russian Federation, South Africa, Sweden, Switzerland, Thailand, the United Arab Emirates the United Kingdom, United States and Venezuela (Bolivarian Republic of). Statements were also made by the representative of the Sudan on behalf of the Group of African States and by the representative of Dominican Republic on behalf of the Group of Latin American and Caribbean States. General statements were also made by the observers for AARSE, CRTEAN, ESA, ESPI, EURISY, IAA, IAF, ISU, ITU, SGAC, SWF and WSWA.

15. The Subcommittee heard the following scientific and technical presentations:

(a) "IAC-16", by the representative of Mexico;

(b) "Earth observations and contributions by GCOM-W" and "Outer space activities of Asia and the result of APRSAF-22", by the representatives of Japan;

(c) "Medium- and long-term development plan of civil space infrastructure in China", by the representative of China;

(d) "The role of Italian industry in space exploration" and "The Italian Space Agency ISS science directory", by the representatives of Italy;

(e) "Presentation of Netherlands space activities", by the representative of the Netherlands;

(f) "Russian space very long baseline interferometry missions: results and prospects", by the representative of the Russian Federation;

(g) "Czech space industry in space research and development", by the representative of the Czech Republic;

(h) "High altitude Mars analogue research: results from the AMADEE-15 glacier Mars simulation", by the representative of Austria;

(i) "Recent Indian space missions; update as of February 2016", by the representative of India;

(j) "Why an International Lunar Decade Campaign for Science, Exploration, and Development can make a difference", by the observer for NSS;

(k) "Space Generation: perspective from the next generation, 2016", by the observer for SGAC.

16. The Subcommittee welcomed El Salvador, Israel, Oman, Qatar, Sri Lanka and the United Arab Emirates as the newest State members of the Committee on the Peaceful Uses of Outer Space, which brought the membership of the Committee to 83 States.

17. At the 835th meeting, the Chair of the Subcommittee made a statement outlining the work of the Subcommittee at its current session. He brought to the attention of the Subcommittee several provisions of General Assembly resolution 70/82 pertaining to the current work of the Subcommittee and drew to the particular attention of the Subcommittee the fact that the General Assembly had emphasized the significant progress in the development of space science and technology and their applications that had enabled humans to explore the universe, and the extraordinary achievements made over the past 50 years in space exploration efforts and that in that regard, the General Assembly had recognized the unique platform at the global level for international cooperation in space activities represented by the Committee on the Peaceful Uses of Outer Space and its Scientific and Technical Subcommittee and Legal Subcommittee and assisted by the Office for Outer Space Affairs of the Secretariat. Further , the Chair stressed that research and development in space science and technology remained a fundamental prerequisite for any space application for the benefit of human development on Earth, for protecting and preserving the Earth and the space environment, and in any exploration efforts in the universe, and therefore the Committee and its subsidiary bodies stood at the forefront in bringing the world together in using that technology for peaceful purposes.

18. Also at the 835th meeting, the Director of the Office for Outer Space Affairs made a statement in which she reviewed the work carried out by the Office during the previous year and presented a detailed description of planned activities for the coming year, including outreach activities and cooperation and coordination with United Nations entities and international intergovernmental and non-governmental organizations. She provided a comprehensive account of the work of the Office in support of the objectives of the plan of work of the fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space in 2018 (UNISPACE+50). She stressed the current unfavourable financial situation of the Office and highlighted the importance of the availability of financial and other resources for the successful implementation of the programme of work of the Office. She also described the Office's work in coordinating activities among United Nations entities in the areas of sustainable development, global health, emerging issues in commercial space transportation and regulatory aspects of small satellites as examples of the successful implementation of the mandate of the Office.

19. The Subcommittee observed a minute of silence to mark the passing of Boutros Boutros-Ghali, the sixth Secretary-General of the United Nations, from January 1992 to December 1996.

20. Some delegations condemned the launch of a long-range ballistic missile by the Democratic People's Republic of Korea on 7 February 2016 despite the grave concern expressed by the international community and in violation of Security Council resolutions 1718 (2006), 1874 (2009), 2087 (2013) and 2094 (2013), as it contributed to that country's development of nuclear weapon delivery systems.

21. The Subcommittee noted with satisfaction that the Office continued to monitor and implement decisions and recommendations of the Security Council and General Assembly, which were relevant to its work and to activities performed by entities affiliated to the United Nations in accordance with the mandate by the Committee, as well the Office's collaboration with the Panel of Experts established by the Security Council resolution 1874 (2009).

22. The Subcommittee welcomed with satisfaction the adoption by the General Assembly of 2030 Agenda for Sustainable Development. In that connection, some delegations expressed the view that the General Assembly had made it clear that space technology had immense potential to benefit both developed and developing countries, and in that regard the United Nations would be required to promote equal, non-discriminatory access to outer space, irrespective of levels of social, economic or scientific development.

23. The Subcommittee agreed that the improvement of human development, prosperity and well-being required a global approach and thus there was an ample opportunity for all countries to participate in finding ways and means to better serve humanity through the peaceful uses of outer space, which could be achieved through closer collaboration and full support in knowledge-sharing and capacity-building among States on the basis of bilateral and multilateral cooperation.

24. The Subcommittee agreed that space science and technology were essential to successfully address the current and future challenges of social and economic development and sustainability, in particular communication and navigation systems, natural disaster management and emergency response, food security, climate change and natural resource management. In that connection, the Subcommittee emphasized the crucial role of space activities in supporting sustainable development, especially as regards the sustainability of economic growth, improvement in the quality of life and global environmental management.

25. Some delegations expressed the view that developing countries should benefit from space technologies, in particular to support their social and economic development; that it was necessary to promote cooperation to facilitate data exchange and the transfer of technology among States; and that training of scientists in developing countries was crucial for the free flow of scientific information and data exchange, increased capacity-building and the sharing of knowledge.

26. Some delegations expressed the view that the benefits of outer space activities were cross-cutting in terms of disaster management, agriculture, health, education and sustainable development.

27. Some delegations expressed the view that international and regional cooperation in the peaceful exploration and use of outer space for meeting global development goals was essential for States and thus it should be continuously strengthened within the context of the Committee and its Subcommittees, which should remain a central international forum for those matters. In that regard, it would be essential to explore different options for strengthening the capabilities of the Office for Outer Space Affairs, in order for it to actively contribute to the promotion of space science and technologies and their applications for the benefit of all States, in particularly developing States.

28. Some delegations reaffirmed the commitment of their countries to the peaceful use and exploration of outer space and emphasized the following principles: equal and non-discriminatory access to outer space and equal conditions for all States, irrespective of their level of scientific, technical and economic development; non-appropriation of outer space, including the Moon and other celestial bodies, by claim of sovereignty, use, appropriation, occupation or any other means; the commitment by States to the use of outer space exclusively for peaceful purposes, as a common heritage of humankind; the non-militarization of outer space, the non-placement of weapons in outer space, and its strict use for the improvement of living conditions and peace on the planet; and regional cooperation to promote the development of space activities.

29. Some delegations expressed the view that, given the impact of space activities on human life and the environment, as well as the current state of technological advances coupled with the increasingly prominent role played by new private actors, there should be greater coordination and interaction between the Scientific and Technical Subcommittee and the Legal Subcommittee in order to promote the progressive development of international law and its codification, as well as the establishment of binding international norms addressing issues which were critical in the use and exploration of outer space.

30. Some delegations expressed the view that any initiative related to the use of outer space should be addressed by the Committee and that the discussion within multilateral organizations with specific mandates was an essential condition for the development of binding legal instruments that contributed to the improvement of space law and that would allow the equal participation of all States. Those delegations were of the view that in relation to outer space, topical issues of international cooperation, such as space debris, exchange of information, notification mechanisms and long-term sustainability of outer space activities could not be subject to non-binding agreements negotiated outside the framework of the United Nations.

31. The Subcommittee commended the Office for Outer Space Affairs for its tireless efforts in the development of space applications and encouraged the Office to continue its constructive cooperation to facilitate availability and accessibility of space technology and space applications for all States.

32. The Subcommittee expressed its gratitude to Japan for organizing a seminar on the theme "Japanese unique technology for space activity", held on the margins of the current session of the Subcommittee.

E. National reports

33. The Subcommittee took note with appreciation of the reports submitted by Member States (A/AC.105/1100 and Add.1, A/AC.105/1100/Add.1/Rev.1 and conference room paper A/AC.105/C.1/2016/CRP.10) for its consideration under agenda item 4, "General exchange of views and introduction of reports submitted on national activities". The Subcommittee recommended that the Secretariat continue to invite Member States to submit annual reports on their space activities.

F. Symposium

34. In accordance with the agreement reached by the Subcommittee at its forty-fourth session, in 2007 (A/AC.105/890, annex I, para. 24), and at its fifty-second session, in 2015 (A/AC.105/1088, para. 274 and annex I, para. 8), a symposium organized by the Office for Outer Space Affairs on the topic "The role of industry in space exploration" was held on 15 February 2016.

35. The Subcommittee noted with satisfaction that the symposium was the tenth in a series of symposiums to strengthen the partnership with industry and, in that connection, commended the Office for Outer Space Affairs for its excellent work.

36. The symposium, which was organized in the form of presentations and discussions, was moderated by Steve Bochinger of Euroconsult and was opened and concluded with remarks by the Director of the Office for Outer Space Affairs. The presentations given at the symposium included the following: "Space exploration in the space economy" by Steve Bochinger of Euroconsult, "Space industry and space exploration in Europe" by Carlo Mirra of Airbus Defence and Space, "Space industry and space exploration in the United States" by Mark Skinner of Boeing, "Commercial space transportation" by Mark Sundahl of the International Space Policy Working Group of the Commercial Space Transportation Advisory Committee of the Federal Aviation Administration of the United States and "Space industry and space exploration in Japan" by Hiroshi Koyama of Mitsubishi Electric Corporation.

37. During the symposium, a presentation entitled "Role of the Chinese space industry in space exploration" was made by Fan Weina of the China Aerospace Science and Technology Corporation.

G. Adoption of the report of the Scientific and Technical Subcommittee

38. After considering the items before it, the Subcommittee, at its [...] meeting, on [...] February 2016, adopted its report to the Committee on the Peaceful Uses of Outer Space, containing its views and recommendations, as set out in the paragraphs below.